

ENGINEERING BRIEF NO. 63A

REVISION - USE OF NON-STANDARD 75-FOOT-WIDE STRAIGHT TAXIWAY SECTIONS FOR AIRBUS 380 TAXIING OPERATIONS

April 2006

A. **BACKGROUND**

In August 2003, Engineering Brief No. 63, *Use of Non-Standard 75-Foot-Wide Straight Taxiway Sections for Airbus 380 Taxiing Operations*, was issued to give Regional Division Managers approval authority to issue a modification to standard for A380 taxiing on 75-foot-wide straight taxiway sections. *Section D, Specific Conditions*, of that engineering brief identified seven imposed conditions.

Engineering Brief No. 63 was issued to mitigate the impacts by the A380, a Design Group VI aircraft, when taxiing on existing taxiway systems built to Design Group V standards. Section D resulted from field tests conducted in 1999 and sponsored by the Airport Engineering Division, AAS-100, that focused on taxiway widths for straight sections. These field tests measured the wander rate of Boeing 747 airplanes from the taxiway centerline of 75-foot taxiways to determine if it would be possible to reduce the 100-foot taxiway width standard for all DG-VI-airplanes. Based on the preliminary field test results and that Airbus Industries informed the FAA that it would equip the A380 with a taxiing camera system to assist the flight crew in taxiing, we determined that it is possible to allow the use of existing non-standard 75-foot-wide straight taxiway sections by this airplane on an interim basis under the specific conditions of Section D.

Engineering Brief #63A is being issued in response to the worldwide partnership between the FAA and several foreign aviation authorities who implemented their own taxiway centerline wander field studies to determine if differences exist between taxiing operations in the United States and foreign international airports. The worldwide evaluations being cited are those that have been concluded at London Heathrow International Airport, Charles de Gaulle International Airport, Frankfurt International Airport, and just recently, Sydney International Airport. Their independent findings further supported the preliminary observation, recorded by FAA field evaluations at John F. Kennedy International Airport and at Anchorage International Airport, that taxiway centerline wander of observed aircraft on straight sections was independent of speed and time of day. Thus, Engineering Brief #63A is being issued to delete *Item 2, Taxiing Speed*, under *Section D, Specific Conditions*, of Engineering Brief #63.

Although Engineering Brief 63A deletes the taxiing speed limitation, it does not prohibit airport authorities from imposing their own taxi speed restrictions deemed necessary to address an unusual airport condition.

B. PURPOSE.

Engineering Brief #63A, which cancels Engineering Brief #63, is provided to allow Regional Division Managers to approve modifications to standards for A380 taxi routes using 75-foot-wide straight taxiway sections. This guidance applies to existing taxiways only. New taxiway construction or major reconstruction should comply with Design Group VI standards.

C. DEFINITIONS

1. **Interim Basis.** A 5-year evaluation period to observe the in-service taxiing characteristics of A380s.
2. **Overall Taxiway Width.** The sum of the widths of the shoulders and full-strength taxiway pavement.
3. **Taxiing Camera System.** A TCS installed on A380s that is available to assist flight crews during taxiing.

D. SPECIFIC CONDITIONS

Approval of modifications to standards for the use of 75-foot wide straight taxiway sections by A380 aircraft are subject to the conditions detailed below.

1. **Taxi Routes.** Proposed taxi routes must be designated by the airport authority.
2. **Taxiing Camera System (TCS):** A380s will be equipped with a TCS.
3. **Taxiway Centerline Lighting:** Taxiway centerline lighting shall meet the longitudinal spacing requirements detailed in Table 4-1 of AC 150/5340-30B, *Design and Installation Details for Airport Visual Aids*, for below 1200 feet RVR.
4. **Overall Taxiway Width.** The overall taxiway width must be at least 180 feet. Airports must construct the additional shoulder width in accordance with AC 150/5300-13, *Airport Design*, paragraph 803, “Shoulders and Blast Pads.”
5. **Jet Blast Effects Along Designated A380 Taxiway Routes:**
 - a. **Pre-A380 Service.** Airport authorities must take remedial actions to minimize excessive jet blast exposures for those areas identified by the FAA.
 - b. **Post-A380 Service.** Airport authorities must take remedial actions to minimize excessive jet blast exposures for newly identified areas that become troublesome.

6. **Excursions from Non-standard Taxiways.**
A modification to standards should be withdrawn if there are repeated excursions from full-strength taxiway pavements, defined as one excursion per month.

ORIGINAL SIGNED BY

Rick Marinelli
Manager, Airport Engineering Division, AAS-100